

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Appln. No. 10/694,219

AMENDMENTS TO THE DRAWINGS

Applicant is submitting herewith eight sheets of replacement drawings. No changes have been made to the drawings. The submitted drawings are intended to replace the facsimile copy of the drawings originally filed with the application on October 28, 2003.

Attachment: Replacement Sheets

REMARKS

Claims 1-5 are all the claims pending in the application. Claim 5 is added by way of this Amendment to further define the invention as discussed in further detail below.

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Claims 1-3 are rejected under 35 U.S.C. § 102(b) as being anticipated by Krnan (4,875,546).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Krnan (4,875,546).

Analysis

The present invention is directed to a bass reflex buzzer in which a resonant frequency thereof is set in a range of $F_0 < F_{v2} \leq F_{v1}$. In particular, the present invention relates to improving the frequency characteristic of a small sized electromagnetic-type electroacoustic transducer.

The present invention may be used for a product having a size of $4.2 \text{ mm} \times 4.2 \text{ mm} \times 3 \text{ mm}$, and thus, is capable of allowing an electromagnetic electroacoustic transducer to have a small size, a high sound pressure and a flat frequency characteristic by communicating the rear space and the second sound hole through the portion at which the lead terminal and the coil terminal are connected.

On the other hand, Krnan discloses a large sized speaker apparatus. In addition, Krnan does not disclose a configuration of a sound path in a rear space as in the invention according to claim 1. In other words, according to claim 1, a lead terminal is connected to a coil terminal of the electromagnetic coil, and the case has at least two sound emitting holes, wherein the second sound emitting hole through which a rear space on a rear surface of the diaphragm in the casing communicates with the front outer space in front of the casing through a space provided to a portion at which the lead terminal and the coil terminal are connected. This structure is missing from Krnan, and thus, claim 1 is patentable.

With respect to independent claim 4, by setting Fv1 at the value near a frequency three times as high as F0, and by setting Fv2 at the value near a frequency twice as high as F0, a high sound pressure and a flat frequency characteristic can be obtained. However, Krnan fails to disclose these settings for Fv1 and Fv2.

According to MPEP § 2144.05, a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. See also, *In re Antonie*.¹ Krnan does not teach or suggest that the relative relationships of F0, Fv1 and Fv2 would achieve the recognized result, and thus, it would not have been obvious to arrive at claim 4.

¹ 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

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The remaining rejections are directed to the dependent claims 2 and 3. These claims are patentable for at least the same reasons as claim 1, by virtue of their dependency therefrom.

Finally, Applicant adds claim 5 to further define the invention. Claim 5 is patentable for at least the same reasons as claim 1. Moreover, claim 5 is directed to the space provided to the portion at which the lead terminal and the coil terminal are connected, which is a corner portion of the casing. This arrangement is not taught or suggested by the prior art.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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23373

CUSTOMER NUMBER

Date: December 22, 2004

Attorney Docket No.: Q78193